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EXAMINER
ARANI, TAGHI T

ART UNIT	PAPER NUMBER
2131	

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Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		09/640,016	NAGAI, YASUHIKO
		Examiner	Art Unit
		Taghi T. Arani	2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on <u>21 September 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 17-22* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 17-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152) .

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-15, 17-22 are pending in the Application.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2.   Claims 1, 17-22 are rejected under 35 U.S.C. 101 because claims 1, 3, 17-22 are directed

to a security system design. The language of the claims raises a question as to whether the claims

are directed merely to an abstract idea that is not tied to a technological art, environment or

machine which would result in a practical application producing a concrete, useful, and tangible

result to form the basis of statutory subject matter under 35 U.S.C. 101.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   **Claim 1, 3-4, 7, 9-10, 12-13, 15, 17,19 and 20-21** rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention.

Claims 1, 3 recite "storing <u>internationally registered</u> protection profiles ....that have

been generated..... and <u>not internationally registered</u>", emphasis added, in lines 6-8 of claim 1,

lines 5-7 of claim 3.

Claim 17 recite "a class tree of <u>internationally registered</u> PPs .... <u>not internationally</u>

<u>registered</u>", emphasis added, lines 5-6.

Claim 19 recites "storing <u>internationally registered</u> PPs .... <u>not internationally</u>

<u>registered</u>", lines 6-8.

Claim 21 recites "storing <u>internationally registered</u> protection profiles .... generated in

the past and <u>not internationally registered</u>", emphasis added, lines 6-8.

It is not cleared and it is confusing as to whether the recited "protection profiles'' and "

class tree" are internationally registered or not internationally registered.

Claim 20 recites the limitation "the PP?ST construction cases" in 6. There is insufficient

antecedent basis for this limitation in the claim.

Dependent claims **4, 7, 9-10, 12-13** are also rejected by virtue of their dependencies.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Richard

Baskerville, ACM Computing Surveys, December 1993 .

As per claims 1, 13, 17 and 21, Baskerville discloses a security system design

supporting method for supporting designing of security requirements or security specifications

based on an international security evaluation criteria during planning/designing of an

information-related product or an information system (see Introduction , page 375), said method

comprising the steps of:

providing a template case database for storing internationally registered

protection profiles (PP) or PP/STs (security targets), that have been generated and not

internationally registered, in a class-tree structure based on a relation between types of products

or systems as a target of evaluation (TOE) of said PP/STs [Pages 380-381, section 1.1 Checklist

System Development methods, i.e. Baskerville discloses in the first generation of security system

design , designers mark off the desired items from a checklist of possibilities. This reads on the

recited 'providing a template case database..........."];

specifying the PP/STs related to the TOE by designating elements included in the

products or systems, type and evaluation assurance level of the TOE and retrieving a relevant

class-tree structure from said database [page 380, section 1.1, page 381, section 1.2, Baskerville

discloses in the first generation of security system design (i.e. internationally registered and that

checklist is in the form of questions based on international security evaluation recited in **claim**

13), checklist designs begin their design with examination of all known risks and controls and

that a list is provided of every conceivable control that can be implemented] ; and

automatically generating a PP/ST draft of the TOE by integrally editing contents of a

definition of the specified PP/STs [see Table 1, under Primary Features, Baskerville discloses

that the First generation Checklist maps (i.e. generates) the limited solutions onto the information

problem].

As per claims 2 and 14, Baskerville discloses a security system design supporting method

comprising the steps of:

providing a partial case database for storing a security environment including

assumptions, threats and organizational policies corresponding to the elements of the product or

system accumulated by the PP/ST-applied, security objectives corresponding to the security

environment, CC requirements corresponding to the security objectives, and information of a

summary specification corresponding to the CC requirements [see page 383, under section Risk

Analysis and security evaluation, Baskerville discloses that security checklists are techniques

fore evaluating an information system's vulnerability and that checklist organization (see Table

3) includes security environment, assumptions , threats , etc (i.e. internationally registered and

that checklist is in the form of questions based on international security evaluation recited in

claim 14.] ;

automatically mapping from said database to corresponding information by designating

the elements included in the product or system, the security environment, the security objectives

and the security requirements of the TOE; and automatically generating a portion of contents of

definition of the PP/ST associated with the TOE based on the corresponding information thus

mapped. Page 379, Table 1, under Primary Features Baskerville discloses that the First

generation Checklist maps (i.e. generates) the limited solutions onto the information problem]

As per claims 3 and 15, Baskerville discloses a security system design supporting

method comprising the steps of:

automatically generating a PP/ST draft by a first security system design supporting method

,which comprises the steps of:

providing a template case database for string internationally registered protection

profiles (PP) or PP/STs (security targets), that have been generated in the past and not

internationally registered, in a class-tree structure based on a relation between types of products

or systems as a target of evaluation (TOE) of said PP/STs database [Pages 380-381, section 1.1

Checklist System Development methods, i.e. Baskerville discloses in the first generation of

security system design , designers mark off the desired items from a checklist of possibilities.

This reads on the recited 'providing a template case database..........." and that internationally

registered and that checklist is in the form of questions based on international security

evaluation recited in **claim 15**],

specifying the PP/STs related to the TOE by designating elements included in

the products or systems, type and evaluation assurance level of the TOE and

retrieving a relevant tree from said database[page 381, section 1.2, Baskerville discloses in the

first generation of security system design, checklist designs begin their design with examination

of all known risks and controls and that a list is provided of every conceivable control that can be

implemented], and

automatically generating a PP/ST draft of the TOE by integrally editing

contents of a definition of said specified PP/STs;

partially adding or correcting the PP/ST by a second security system

design supporting method, which comprises the steps of:

providing a partial case database for storing a security environment including

assumptions, threats and organizational polices corresponding to elements of the

products or systems accumulated by the PP/ST-applied cases, security objectives

corresponding to the security environment, CC requirements corresponding to the

security objectives, and information of a summary specification corresponding to the

CC requirements [page 379, table 2, under the heading Objective, selecting components]

automatically mapping from said database to corresponding information by

designating the elements included in the products or systems, the security

environment, the security objectives and the security requirements of the TOE, and

automatically generating a portion of contents of a definition of the PP/ST

associated with the TOE based on the corresponding information thus mapped [page 379, table 2,

under the heading Challenges, discloses mapping problem to solution (fin the First generation)

and organizing and integrating.a complex set of elements (in the second generation) and

selecting the correct attributes for the model (in the Third generation)].

As per claim 4, A security system design supporting method

according to Claim 1, further comprising the steps of:

indicating the PP/STs stored in the template case database as icons by which the

elements, type and the evaluation assurance level can be identified [page 381, section 1.2,

Checklist Security development Methods]

specifying the PP/STs related to the TOE from the related class-tree based on reference

PP/ST cases of the relations between the PP/STs expressed in a tree; and producing a structure

diagram of the TOE using the icons of said specified PP/STs as constituting elements [page 381,

Baskerville discloses that checklist methods begin their design with an examination of all known

risks and controls and a list is provided of every conceivable control that can be implemented in

a computer based system. Baskerville further discloses that the Analyst first checks to see if the

control id already in place, analyses its necessity when it is not found, and implements the

control when required].

As per claim 5, Baskerville discloses security system design supporting method

according to Claim 2, further comprising the steps of:

storing data concerning probability of occurrence of each threat and the loss amount

affected by the threat and cost of protection each security objective collectively in the partial

case database [page 383, under the heading Elementary Information Security Risk analysis] ;

producing a formula of a combinatorial optimization problem by designating the

constraints of a risk acceptance, a cost limit value, a ratio of residual risk to protection cost and

objective functions for cost minimization or protection risk maximization with respect to a

relation between risk of each threat (the probability of occurrence multiplied by affected loss

amount and the cost of protection of the corresponding security objectives[That is, R=P x C};

and

determining cost-effective optimal security objectives by solving said combinatorial

optimization problem [page 384, Baskerville discloses figures to be used for new controls and

cost, justifying any control changes in the system].

As per claim 6, Baskerville discloses a security system design supporting method

according to Claim 2, further comprising the step of:

verifying whether requirements of automatically generated contents of definition match

dependency or relation between functional requirements and assurance requirements of the

reference specifications based on the dependency or relation of the reference specifications [page 379, under the heading Means, Baskerville discloses solving each functional requirement in the Second Generation].

As per claims 7, 8 and 9, Baskerville discloses a security system design supporting method according to claims 1, 2 and 3, further comprising the steps of:

automatically generating a rationale matrix indicating in a matrix table each correspondence between the-security environments, security objectives, tire security requirements and summary specification as a part of contents of the PP/ST definition front a security environment, the security objectives, the security requirements and the summary specification or the correspondence between them; and

verifying presence or absence of definition information lacking correspondence using a rationale matrix generated [page 385, under the heading Smith-Lim, Knowledge base System, Baskerville discloses tree based and Knowledge base which corresponds to the recited limitations of automatically generating a rational matrix and verifying presence or absence of definition information using the matrix].

verifying presence or absence of the-definition information lacking the correspondence using said rationale matrix generated.

As per claims 10, 11 and 12, Baskerville discloses a security system design supporting method according to claims 1,2 and 3 further comprising the steps of:

storing information newly added in a process of PP/ST generation and a result of PP/ST generation in accordance with relation and correspondence in the template case database and the partial case database; and improving and expanding information stored in the case

database [page 385, Fig. 1, Baskerville discloses that in Smith-Lim Approach, the summary of

mapping the "threats" to ' targets" can be adjusted to the reference of the organization, page 383,

Baskerville disclose that checklist along with a formal cost-benefit model provides a formal ,

rationale means for consistently evaluating (adding or eliminating) highly specific vulnerabilities

which analysts can justify or reject various controls from an extensive checklist (or database)].

As per claims 18, Baskerville discloses a security system design

supporting method executed using a case database for storing a security environment including

assumptions, threats and organizational policies corresponding to elements of a product or a

system accumulated :by PP/ST-applied cases, security objectives corresponding to security

environment, CC requirements corresponding to the security objectives, and information on a

summary specification corresponding to the CC requirements, said method comprising the steps

of:

storing data concerning a probability of occurrence of each threat and a loss amount

affected by the threat together with protection cost data of each security objective in said case

database [Page 383, section 1.3.1 under the heading of Elementary Information Security Risk

Analysis, P];

expressing in a formula a combinatorial optimization problem by designating constraints

including risk acceptance, cost limit value, ratio of a residual risk to a protection cost and

objective functions for protection risk maximization or cost minimization with respect to the-

relation between the risk of each threat and the protection cost of corresponding security

objectives, the risk being expressed as the a product of a probability of occurrence and affected

loss amount { R=P x C]; and

determining a cost-effective optimal security objective by solving said combinatorial

optimization problem [Page 383, left column].

Claim 21 is a computer program code corresponding to claim 18. Claim 19 is rejected for

· same reason provided in the statement of rejection of claim 18.

Claims 19 is a computer program code means corresponding to claims 1 and 10. Claim

19 is rejected for the same reasons stated in the statement of rejection of claims 1 and 10 above.

Claim 21 is a computer program corresponding to claim 1. Claim 21 is rejected for the

same reason stated in the statement of rejection of claim 1 above.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
·

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 22 is rejected under 35 U.S.C. 102(e) as being anticipated by EP 1 065 861,

published March 2001.

EP1065 861 teaches a security design supporting method for creating a security

specification of an information system or a product, comprising the steps of (see abstract):

providing a database in which security specifications relating to an information system

or an information product are previously registered in a class-tree structure based on an

inheritance relation between constituent elements, types of product or certification levels [page

5, paragraph 0027-0029, see also claim 1];

when creating a security specification of an objective information system or a product as

an object to be designed, sending relevant constituent elements or relevant security specifications

of a product from said database using objective constituent elements, product type and acquired

certification level as a search key [page 6, paragraph 0029, lines 45-65]; and

when a plurality of specifications are searched, integrally editing the searched plurality of

specifications into one specification according to a format of prescribed contents in respect to

descriptions of the searched specifications to thereby automatically generate a specification draft

of the objective information system or product [page 9, lines 43-53].

Conclusion

6.   Prior arts made of record, not relied upon:

US Patent 5,588,056 is directed to a pronounceable security password using a plurality of

first word segment portions and second word segment portions, each of which has at least one

character. A transition number, for each of the plurality of first word segment portions is

identified, preferably using a Markov model. Each transition number corresponds to the number

of different second word segment portions which can be combined with the first word segment

portion to form a pronounceable word segment, such a word syllable. A first word segment

portion is randomly selected. The selection of any one of the plurality of first word segment

portions is of substantially equal probability. A second word segment portion, to which the

transition number associated with the selected first word segment portion corresponds, is then

randomly selected. The selection of any one of the corresponding second word segment portions

is likewise of substantially equal probability. The selected first and second word segment

portions are combined to form at least a part of the pronounceable security password.

US patent 6,405,364 discloses a system for building systems in a development

architecture framework. The present invention is directed to both a system to be built and an

implementation strategy to fulfill system requirements. Software components of the system are

encapsulated with wrappers. The wrappers are adapted to be changed upon other software

components of the system being changed while the encapsulated software components of the

system remain unchanged. In one embodiment of the present invention, specifying the

requirements of the system to be built and the implementation strategy to fulfill the requirements

may be carried out using tools such as data modeling tools, process modeling tools, event

modeling tools, performance modeling tools, object modeling tools, component modeling tools,

reuse support tools, prototyping tools, application logic design tools, database design tools,

presentation design tools, communication design, and usability test tools. In another embodiment

of the present invention, improving the performance and maintenance of the system may be

carried out using tools such as interactive navigation tools, graphical representation tools,

extraction tools, repository tools, restructuring tools, and data name rationalization tools.

Automated Password Generator (APG), SIPS PUB 181, October 5, 1993, pages 1-9

downloaded from the Internet, Feb. 2, 2005.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taghi T. Arani whose telephone number is (571) 272-3787. The examiner can normally be reached on 8:00-5:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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